

**2010-2016 CAPITAL PLAN**  
**PROPOSED CAPITAL PROJECT**  
**FORM SYP-P2**  
**PLAN VERSION - 3**

7/30/2009

**Branch:** Executive Branch  
**Cabinet/Function:** Finance and Administration Cabinet  
**Agency/Institution:** Commonwealth Office of Technology

**Project Title** Enterprise GIS Software and Imaging Upgrade  
**Category** Information Technology System  
**Biennium** 2014-2016  
**Location (county)** Multi-County  
**Location (ADD)** N/A  
**Appropriation Unit** 0790

**Additional Funding?** No

**Brief Description/Justification:**

Kentucky has long been a leader in the nation for Geographical Information Systems (GIS). The initiative will continue the effort to build a current basemap for the Commonwealth including current color leaf-off aerial photography and elevation data (LIDAR as well as Enterprise GIS software that would provide complete flexibility in terms of deployment of GIS software products when and where needed across the Enterprise. This would allow the Commonwealth to further capitalize on its role as a GIS leader. The project will provide significant savings to government and the private sector in using a common basemap, avoiding duplication, and encourage standardization of Geographic Information Systems (GIS) assets throughout the Commonwealth.

**PROJECT BUDGET**

<u>Fund Sources</u>	<u>Amount</u>	<u>Cost Elements</u>	<u>Amount</u>
General Fund		Hardware	
Restricted Funds	1,000,000	Software	986,000
Federal Funds	2,284,000	Professional Services	2,298,000
Road Fund		Digital Data Products	
Agency Bonds		Other(specify)	
Other(Private - Cash)			
Other(LT Financing)			
Total	3,284,000	Total	3,284,000

**Explanation of Project Budget**

Amounts based on current industry estimates

**IMPACT ON OPERATING BUDGET?** No

**PROJECT DETAIL**

**Method of Procurement** Purchase  
**Program Purpose**  
**Completion Date** 12/2016

**Existing System?** Yes  
Upgrades/Enhances existing GIS systems

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**Phased Project?** Yes

2010 - 2012 Enterprise GIS Software and Imaging Upgrade  
2012 - 2014 Enterprise GIS Software and Imaging Upgrade  
2014 - 2016 Enterprise GIS Software and Imaging Upgrade

**Additional Description/Justification**

The initiative will continue the effort to build a current basemap for the Commonwealth that can meet the needs of its users at the state, federal, local, and regional level. A common basemap, including current color leaf-off aerial photography and elevation data (LIDAR), reduces the cost of developing GIS applications, promotes data sharing, and add efficiencies to many state agency business processes. Access to the basemap data will be made available in the public domain. Below is a brief listing of applications for digital color leaf-off photography and elevation data: Basemap functions - Dam Breach Analysis - Flood Plain Mapping - Improved Engineering

Transportation Planning - Crop usage analysis - Emergency response - Critical Infrastructure Mapping

The most current digital color leaf-off aerial photography of the Commonwealth was acquired in 2001 and 2002 but only east of 84 degrees longitude (ie. East of Winchester - only  $\frac{1}{4}$  of the state). The photography was captured in a black and white (grayscale) format. Aerial Photography for the remaining  $\frac{3}{4}$  of the state was acquired during the 1992-1998 timeframe. State and Federal Funds were leveraged at that time for the purchase of the photography.

No statewide color leaf-off aerial photography has ever been acquired for the entire Commonwealth, although leaf-on photography (fewer uses) has been purchased. All of Kentucky's current aerial photography holdings are utilized by cities and counties, area development districts, state agencies, and the federal government.

Kentucky's Statewide Digital Aerial Photography and Elevation Basemap Update provides a common digital mapping base for state and local government, as well as the private sector. The digital aerial photography layer provides the foundation for other base layers as well as numerous thematic mapping programs throughout the state and local governments.

It is anticipated that the entire funding package will consist of financial resources from the US Geological Survey (USGS), Farm Services Administration (FSA), and Natural Resources Conservation Service (NRCS), Federal Emergency Management Agency (FEMA), local governments and several state agencies. The effort would span a six year period beginning in 2010 with an estimated project cost of \$9.85 million.

Additionally, an Enterprise License Agreement (ELA) for GIS Desktop and Server Software would provide complete flexibility in terms of deployment of GIS software products when and where needed at a fixed price. Purchasing an ELA would bring all State Agencies into compliance with their GIS software licensing which would ensure access to the most current software and associated support for all agencies. There will be an overall reduction in the administrative and procurement expenses since all billing and payments will be handled by a single State Government Agency. This would allow the Commonwealth to capitalize on GIS investments.

The most significant benefit would be that of unlimited GIS software usage for all State Government employees. Currently, the use of GIS software within agencies is constrained by the cost of acquiring the software and the ability to pay the yearly support maintenance. With an ELA arrangement in place, the appropriate level of software could be utilized by any employee

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with a task that involves the application of GIS Technology. Historically, the cost of the GIS software, hardware, and data access has made it difficult to implement from a fiscal perspective. The cost of hardware is significantly lower than just 5 years ago, and the introduction of Kentucky's rich geospatial data resources have made GIS data access seamless across the WAN and the internet. Unlimited GIS software usage will push utilization of GIS to the next level and will remove uncertainty over access to software and fluctuating budgets

**Previous CAPITAL PLANS?** Yes

2006-2012 Statewide Digital Orthoimagery Basemap Update

2004-2010 Statewide Digital Orthoimagery Basemap Update

**Differences between the current and most recent previous project?** No

**Previous BUDGET REQUESTS?** No

**Previous BUDGET AUTHORIZATIONS?** No